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Attorney's Docket No.: 12259-034US1

IAP9 Rec'd PCT/PTO 22 MAR 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Cambridge Research and Art Unit : Unknown
Instrumentation, Inc. Examiner : Unknown
Serial No. : Not Yet Assigned
Filed : March 22, 2006
Title : SPECTRAL IMAGING OF BIOLOGICAL SAMPLES

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants request consideration of the references listed on the attached PTO-1449 form. Under 37 C.F.R. § 1.98 (a)(2)(ii), only copies of foreign patent documents and/or non-patent literature are enclosed. Copies of any listed U.S. patents or U.S. patent application publications can be provided upon request.

This statement is being filed with the application. Please apply any charges or credits to Deposit Account No. 06-1050, referencing 12406-034US1.

Respectfully submitted,

Date: 3/21/06



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Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12259-034US1	Application No. Not Yet Assigned
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Cambridge Research and Instrumentation, Inc.		
		Filing Date March 22, 2006	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	4,379,233	05/1983	Rosenthal			
	AB	4,519,707	5/23/1985	Kuffer			
	AC	4,669,878	06/1987	Meier			
	AD	4,800,279	01/1989	Hieftji et al.			
	AE	5,029,245	07/1991	Keranen et al.			
	AF	5,042,893	08/1991	Ong			
	AG	5,066,124	11/19/1991	Wulf			
	AH	5,115,137	05/19/1992	Andersson-Engels et al.			
	AI	5,137,364	08/1992	McCarthy			
	AJ	5,424,545	01/1995	Block et al.			
	AK	5,433,197	07/1995	Stark			
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	AM	5,567,937	10/1996	Pinkus			
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	AQ	5,838,451	11/1998	McCarthy			
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	AV	6,075,595	06/2000	Malinen			
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	AY	6,373,568	04/2002	Miller et al.			
	AZ	6,690,466	02/10/2004	Miller et al.			
	AAA						

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	BA	WO 01/11343	2/15/2001	WIPO				
	BB							
	BC							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	BD	P.S. Andersson et al. "Flourescence Endoscopy Instrumentation for Improved Tissue Characterization." Med. Phys. 14 (4) Jul/Aug 1987. 633-636.
	BE	Nicholas Billinton et al., "Seeing the Wood through the Trees: A Review of Techniques for Distinguishing Green Fluorescent Protein from Endogenous Autofluorescence", <u>Analytical Biochemistry</u> , Vol. 291, pp. 175-197 (2001)
	BF	K.J. Brodbeck et al. "A System for Real Time Flourescence Imaging in Color for Tumor Diagnosis." Med. Phys. 14 (4) Jul/Aug 1987 637-639.
	BG	S. Folli et al. "Immunophotodiagnosis of Colon Carcinomas in Patients Injected with Flouresceinated Chimerica Antibodies Against Carcinoembryonic Antigen." Institute of Biochemistry, University of Lausanne, Switzerland. 7973-7977.
	BH	Gentry et al., "Biomedical Applications of the Information-Efficient Spectral Imaging Sensor (ISIS)", Gentry, SPIE Vol. 3603, pp. 129-142.
	BI	David Gillis et al. "Using Endmembers as a Coordinate System in Hyperspectral Imagery." Naval Research Laboratory, Washington, DC. 1-9.
	BJ	Andrew A. Green et al. "A Transformation for Ordering Multispectral Data in Terms of Image Quality with Implications for Noise Removal." IEEE Transactions of Geoscience and Remote Sensing Vol. 26, No. 1 January 1988. 65-74.
	BK	Jacqueline Hewett et al., "The Application of a Compact Multispectral Imaging System with Integrated Excitation Source to <i>In vivo</i> Monitoring of Fluorescence During Topical Photodynamic Therapy of superficial Skin Cancers", <u>Photochemistry and Photobiology</u> , Vol. 73, No. 3, pp. 275-282 (2001)
	BL	Klaus B. Hilger et al. "MADCAM – The Multispectral Active Decomposition Camera." IMM, Informatics and Mathematical Modelling, Technical University of Denmark. 1-7.
	BM	Hyvarinen et al., "Novel Spectroscopic Techniques for Biomedical Applications," Optoelectronics Laboratory, Finland, SPIE Vol. 2084, pp. 224-230.
	BN	L.O. Jimenez et al., "High Dimensional Feature Reduction via Projection Pursuit," TR-ECE 96-5, School of Electrical Engineering, Purdue University, West Lafayette, IN 47907-1285, April, 1995.
	BO	Luis Jimenez et al., "Supervised Classification in High Dimensional Space: Geometrical, Statistical and Asymptotical Properties of Multivariate Data", <u>IEEE Transactions on Geoscience and Remote Sensing</u> , Vol. 37, No. 6, pp. 1-32 (November 1999)
	BP	Keraanen et al., "Thirty-two Channel LED Array Spectrometer Module with Compact Optomechanical Construction," Technical Research Centre of Finland, Electronics Laboratory, Finland, SPIE Vol. 1533 Optomechanics and Dimensional Stability (1991), pp. 122-128.

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Other Documents (include Author, Title, Date, and Place of Publication)

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	CA	Nirmal Keshava et al. "Spectral Unmixing." IEEE Signal Processing Magazine. January 2002. 44-57.
	CB	David Landgrebe. "Hyperspectral Image Data Analysis." IEEE Signal Processing Magazine, January 2002. 17-28.
	CC	David Landgrebe. "Information Extraction Principles and Methods for Multispectral and Hyperspectral Image Data." School of Electrical and Computer Engineering. (1998) 1-29.
	CD	Dimitris Manolakis et al. "Detection Algorithms for Hyperspectral Imaging Applications." IEEE Signal Processing Magazine. January 2002. 29-43.
	CE	Jose M.P. Nascimento. "Vertex Component Analysis: A Fast Algorithm to Unmix Hyperspectral Data." 1-23.
	CF	R.A Neville et al. "Automatic Endmember Extraction from Hyperspectral Data for Mineral Exploration." Fourth International Airborne Remote Sensing Conference and Exhibition June 1999. 1-8.
	CG	Antonio Plaza et al. "A Quantitative and Comparative Analysis of Endmember Extraction Algorithms from Hyperspectral Data." IEEE Transactions on Geoscience and Remote Sensing Vol. 42 No. 3, March 2004. 650-663.
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	CI	F.P. Seelos IV et al. "Bounded Variable Least Squares – Application of a Constrained Optimization Algorithm to the Analysis of TES Emissivity Spectra." Lunar and Planetary Sciences XXXIV (2003) 56-69.
	CJ	Shnitser et al., "Spectrally Adaptive Light Filtering," Physical Optics Corporation, Torrance, CA, SPIE Vol. 3140, pp. 117-127.
	CK	B.R. Stallard, Construction of Filter Vectors for the Information-Efficient Spectral Imaging Sensor," Imaging Spectroscopy IV, Proc. SPIE, Vol 3438, pp. 172-182, San Diego, 1998.
	CL	David W. J. Stein et al. "Anomaly Detection from Hyperspectral Imagery." IEEE Signal Processing Magazine. January 2002. 58-69
	CM	W.C. Sweatt et al., "ISIS; An Information-Efficient Spectral Imaging System," Imaging Spectrometry IV," Proc. SPIE, Vol.3438, pp. 98-106, San Diego, 1998.
	CN	Tamara Troy et al. "Quantitative Comparison of the Sensitivity of Detection of Fluorescent and Bioluminescent Reporters in Animal Models." Molecular Imaging Vol. 5 No. 1, January 2004. 9-23.
	CO	Stefan Wild et al. "Motivating Non-Negative Matrix Factorizations." Department of Applied Mathematics, University of Colorado, 1-11.
	CP	Michael E. Winter. "Fast Autonomous Spectral Endmember Determination in Hyperspectral Data." 13 th Internation Conference on Applied Geologic Remote Sensing, March 1-3 1999. 1-16.
	CQ	Michael E. Winter. "N-FINER: An Algorithm for Fast Autonomous Spectral End-Member Determination in Hyperspectral Data." Department of Earth Sciences. 1-8.
	CR	

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